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# Dairy Production

Issued Monthly by

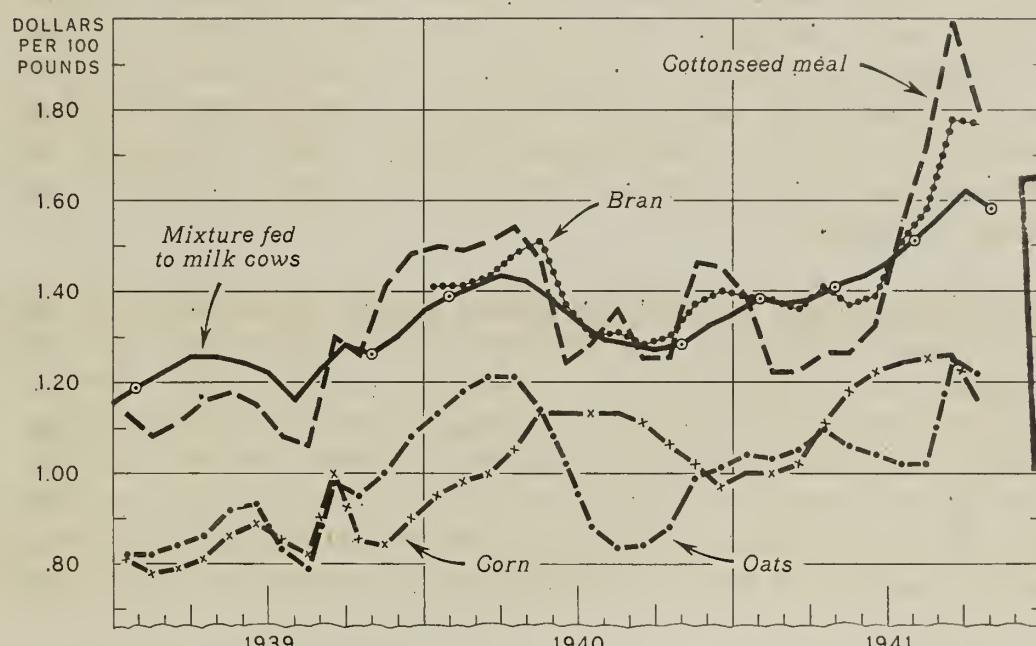
AGRICULTURAL MARKETING SERVICE  
UNITED STATES DEPARTMENT OF AGRICULTURE

No. 19

A.M.S.

NOVEMBER 17, 1941

## PRICES OF GRAINS AND FEEDS, 1939-41



PRICES USED: CORN AND OATS, MID-MONTH PRICES RECEIVED BY FARMERS; BRAN, MID-MONTH PRICE PAID BY FARMERS; COTTONSEED MEAL, AVERAGE WHOLESALE PRICE OF 41 PERCENT, MEMPHIS; MIXTURE FED TO MILK COWS ON 1ST OF MONTH, AS REPORTED QUARTERLY OR SEMI-ANNUALLY BY DAIRY CORRESPONDENTS WITH INTERPOLATIONS

U. S. DEPARTMENT OF AGRICULTURE

NEG. 533 AGRICULTURAL MARKETING SERVICE

PRICES OF FEED GRAINS AND FEEDSTUFFS HAVE BEEN CHANGING RAPIDLY AND UNEVENLY. ON OCTOBER 15, FARMERS WERE RECEIVING SLIGHTLY LESS FOR CORN THAN LAST MAY BUT THEY WERE RECEIVING 16 CENTS PER 100 POUNDS MORE FOR OATS AND THEY WERE PAYING 40 CENTS MORE PER SACK FOR BRAN AND ABOUT 55 CENTS MORE FOR COTTONSEED MEAL. THESE CHANGES IN RELATIVE PRICES HAVE CAUSED CHANGES IN THE COMPOSITION OF THE RATIONS BEING FED, AS EXPLAINED ON PAGE 9. THE RATIONS BEING FED ON NOVEMBER 1 WERE VALUED BY DAIRY CORRESPONDENTS AT \$1.58 PER 100 POUNDS, AN INCREASE OF 23 PERCENT OVER THE VALUE AT THIS TIME LAST YEAR. INCREASES IN THE VARIOUS REGIONS RANGED FROM 21 TO 30 PERCENT, AS SHOWN ON PAGE 10.

## DAIRY PRODUCTION SUMMARY

The dairy industry is moving along at full speed but no one can see very far ahead. Milk production continues heavy but the cost of the extra pounds per cow is high and will presumably increase as the pasture season closes. Domestic consumption of dairy products appears to have eased off slightly as prices rose and both the level of milk production and prices of dairy products now seem to depend largely on the volume of purchases for export and for storage. Stocks are very heavy but the indications are that all will be needed ultimately.

Milk production per cow on November 1 was the highest on record for the date. As production climbs further increases become more difficult. Comparing in each case with the average for the same date during the 1931 to 1940 period, the November 1 reports show daily production per cow up a scant 1 pound or 7 percent; grain and concentrates fed per cow per day up 1 pound or 26 percent; grain and concentrates fed per 100 pounds of milk up 19 percent and the quantity of feed that a unit of milk would buy up 10 percent.

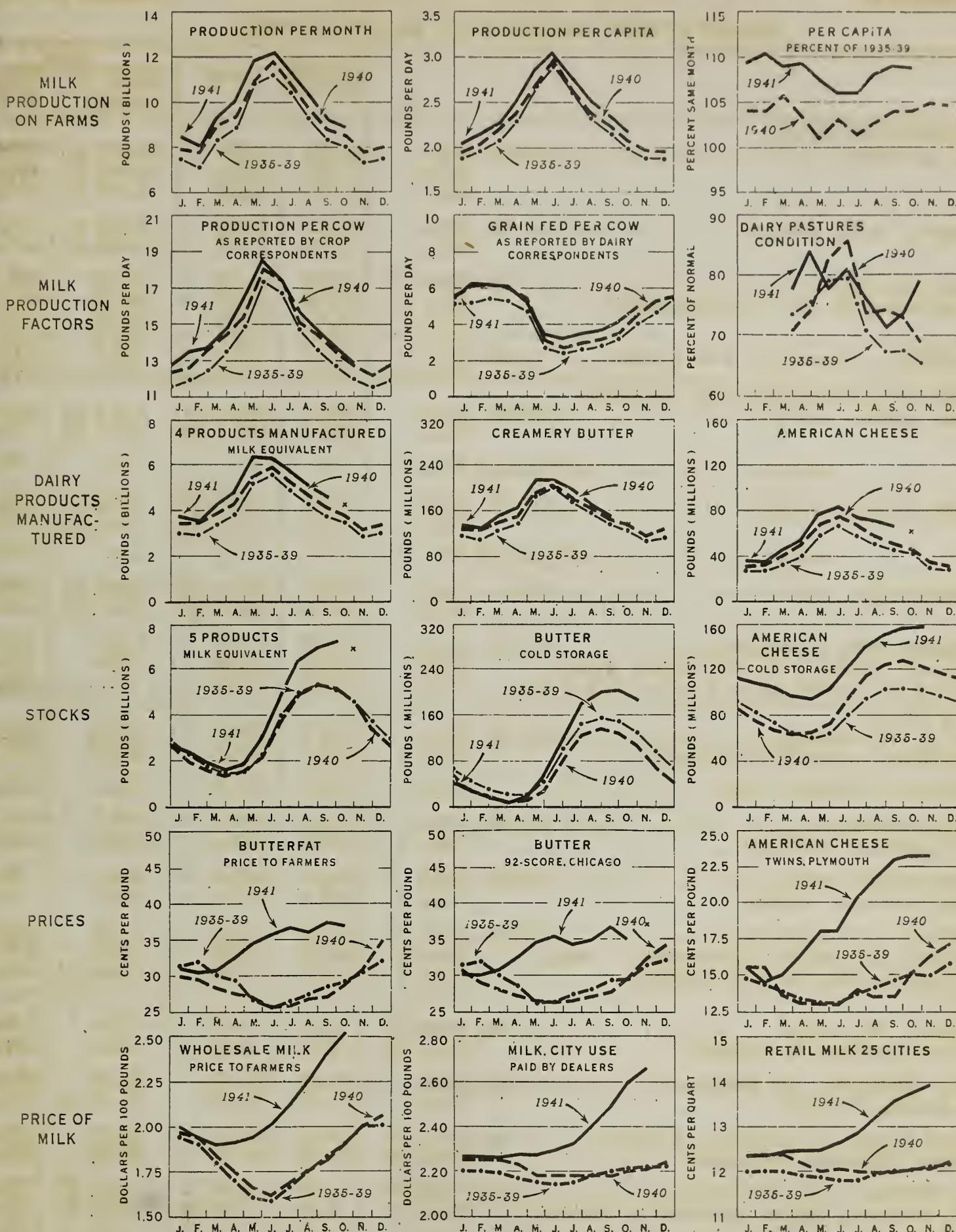
The number of milk cows appears to be increasing rather generally. With prices of dairy products high, cows in demand, hay supplies abundant, and large numbers of heifers being raised, further increases in cows are to be expected for another year or longer, although, no doubt, the increasing movement of workers from the farms to industries will necessitate a reduction of dairy herds on a gradually increasing number of individual farms. The 3 percent increase in cows as compared with a year ago accounts for much of the 5 percent increase in milk production during October.

The total production of manufactured dairy products continues at unprecedented levels for the season. October production of the principal products combined was nearly 9 percent over production in October last year. Evaporated milk production was probably twice the 5-year average for October; cheese has been declining less than usual and may be 50 percent above average in November. Creamery butter production averages about normal for the season but shows striking regional shifts, as diversion of milk to condenseries and cheese factories are offset by greatly increased cream deliveries in some normally unimportant dairy areas.

Stocks of dairy products declined less than usual during October and the total on November 1 was about 50 percent above the 1935-39 average. Increases in stocks account for much of the increase in milk production. Since May 1 the excess of holdings over those on the same dates of last year has increased by an amount equivalent to 2 billion pounds of milk. During the same six months period milk production is estimated to have exceeded production last year by only 3.1 billion pounds.

The prices of dairy products are still far from their usual relation to each other. The price of cheese remains abnormally high and about the same as a month ago. The butter market is uneasy because of heavy stocks and prices have fluctuated nervously. The price of milk for distribution in cities lagged behind prices of other dairy products on the upswing but seems to be catching up gradually.

# DAIRY STATISTICS: GRAPHIC SUMMARY FOR THE UNITED STATES



\* APPROXIMATION BASED ON INFORMATION AVAILABLE TO ABOUT 12TH OF CURRENT MONTH

UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

## Dairy Production

November 17, 1941

## SUMMARY OF DAIRY STATISTICS FOR THE UNITED STATES

|   |             |                             | Average<br>1935-39      | 1940                    | 1941                              |                            |
|---|-------------|-----------------------------|-------------------------|-------------------------|-----------------------------------|----------------------------|
|   |             |                             |                         |                         | Total or<br>average               | Percent<br>of 1940         |
| <b>MILK PRODUCTION ON FARMS:</b>  |             |                             |                         |                         |                                   |                            |
| Total, per month.....   | mil.lb.     | Aug.<br>Sept.<br>Oct.       | 9,330<br>8,338<br>7,992 | 9,812<br>8,880<br>8,510 | 10,385 a/<br>9,330 a/<br>8,928 a/ | 105.8<br>105.1<br>104.9    |
| Per capita, daily average.....  | lb.         | Sept.<br>Oct.               | 2.145<br>1.989          | 2.241<br>2.077          | 2.339 a/<br>2.165 a/              | 104.4<br>104.2             |
| Per cow, per day.....<br>(As reported by crop correspondents)   | lb.         | Sept. 1<br>Oct. 1<br>Nov. 1 | 13.56<br>12.73<br>11.99 | 14.39<br>13.40<br>12.74 | 14.68<br>13.70<br>12.84           | 102.0<br>102.2<br>100.8    |
| <b>DAIRY PASTURES: Condition, % of normal.....</b>  | pct.        | Oct. 1<br>Nov. 1            | 67.7<br>65.7            | 72.8<br>69.0            | 73.7<br>79.1                      | 101.2<br>114.6             |
| <b>PRODUCTION OF MANUFACTURED DAIRY PRODUCTS:</b>   |             |                             |                         |                         |                                   |                            |
| Creamery butter, monthly.....   | mil.lb.     | Sept.<br>Oct.               | 137.6<br>126.9          | 146.2 b/<br>136.8 b/    | 149.7 b/<br>135.4 a/              | 102.4<br>99.0              |
| weekly.....   | week ending | Nov. 6                      | ---                     | ---                     | ---                               | 97.5                       |
| American cheese, monthly.....   | mil.lb.     | Sept.<br>Oct.               | 45.4<br>42.1            | 53.3 b/<br>47.8 b/      | 66.0 b/<br>61.1 a/                | 123.8<br>127.8             |
| weekly.....   | week ending | Nov. 6                      | ---                     | ---                     | ---                               | 130.1                      |
| Evaporated milk, case.....  | mil.lb.     | Aug.<br>Sept.               | 176.2<br>153.3          | 230.4 b/<br>198.8 b/    | 293.4 b/<br>278.7 b/              | 127.3<br>140.2             |
| 4 products, milk equivalent.....<br>(Creamery butter x 21, all cheese except<br>skim x 10, canned cond. & evap. milk x 2.2) | mil.lb.     | Aug.<br>Sept.<br>Oct.       | 4,336<br>3,816<br>3,525 | 4,786<br>4,202<br>3,898 | 5,113<br>4,600<br>---             | 106.8<br>109.5<br>108.7 c/ |
| <b>STOCKS ON HAND:</b>  |             |                             |                         |                         |                                   |                            |
| Butter in cold storage.....<br>(Including government holdings)  | mil.lb.     | Oct. 1<br>Nov. 1            | 148.3<br>129.5          | 128.1<br>105.1          | 203.0<br>186.3                    | 158.5<br>177.3             |
| Commercial holdings, only.....  |             | Nov. 1                      | 102.9                   | 105.0                   | 181.4                             | 172.8                      |
| American cheese.....<br>(Cold storage holdings)   | mil.lb.     | Oct. 1<br>Nov. 1            | 104.4<br>102.1          | 128.1<br>124.8          | 156.7<br>158.0                    | 122.3<br>126.6             |
| Evaporated milk, case.....<br>(Manufacturers' stocks)   | mil.lb.     | Sept. 1<br>Oct. 1           | 299.7<br>253.0          | 349.4<br>380.5          | 289.9<br>339.7                    | 83.0<br>89.3               |
| 5 products, milk equivalent.....<br>(Butter, all cheese, canned cond. & evap.<br>milk plus cream in cold storage)           | mil.lb.     | Sept. 1<br>Oct. 1<br>Nov. 1 | 5,360<br>5,088<br>4,637 | 5,318<br>5,245<br>4,631 | 7,038<br>7,214<br>6,912 c/        | 132.3<br>137.5<br>149.3    |
| <b>PRICES:</b>  |             |                             |                         |                         |                                   |                            |
| Butterfat, per pound..<br>(Prices received by farmers)  | ct.         | Sept. 15<br>Oct. 15         | 28.5<br>29.2            | 27.1<br>28.8            | 37.2<br>36.9                      | 137.3<br>128.1             |
| Butter, wholesale, per pound.....<br>(92 score, Chicago)  | ct.         | Oct.<br>Nov.                | 29.47<br>31.42          | 29.51<br>32.43          | 35.16<br>37.00 d/                 | 119.1<br>114.1             |
| American cheese, wholesale, per pound.....<br>(Twins, Plymouth, Wisconsin)  | ct.         | Oct. 15<br>Nov. 15          | 15.00<br>14.90          | 15.00<br>16.25          | 23.25<br>23.25                    | 155.0<br>143.1             |
| Milk, wholesale, per 100 pounds.....<br>(All purposes, prices received by farmers)  | dol.        | Sept. 15<br>Oct. 15         | 1.84<br>1.92            | 1.84<br>1.91 b/         | 2.41 b/<br>2.52 a/                | 131.0<br>131.9             |
| Milk for city distribution, per 100 lbs. ....<br>(Prices paid by dealers, 3.5% basis)                                       | dol.        | Oct.<br>Nov.                | 2.21<br>2.22            | 2.20<br>2.21            | 2.60 b/<br>2.66 a/                | 118.2<br>120.4             |
| Milk, retail, delivered, per quart.....<br>(Average, 25 markets)  | ct.         | Oct.<br>Nov.                | 12.06<br>12.11          | 12.06<br>12.05          | 13.74<br>13.94 a/                 | 117.8<br>117.9             |

a/ Preliminary. b/ Preliminary revision. c/ Forecast or interpolation. d/ Price Nov. 14

Milk production during October reached 8.9 billion pounds. The increase above the same month a year ago amounted to 5 percent, or about the same as in the first 9 months of the year. Unless unforeseen circumstances interrupt the relatively heavy rate of milk flow, total production on farms for 1941 will probably be about 116.5 billion pounds, a new record by more than 5 billion pounds. Per capita production of milk in October this year averaged 2.165 pounds per day, the highest on record for the month, and more than the usual per capita production in September.

MONTHLY MILK PRODUCTION ON FARMS, UNITED STATES  
1935-39 Average, 1940, and 1941

| Month           | Monthly Total |                |        | Daily Average per Capita |         |        |
|-----------------|---------------|----------------|--------|--------------------------|---------|--------|
|                 | Average :     |                | 1941   | Average :                |         | 1941   |
|                 | 1935-39       | 1940           | 1941   | 1940                     | 1935-39 | 1940   |
|                 |               | Million pounds |        | Pct.                     |         | Pounds |
| January         | 7,480         | 7,952          | 8,448  | 106                      | 1.871   | 1.950  |
| February        | 7,124         | 7,801          | 8,008  | 103                      | 1.957   | 2.044  |
| March           | 8,342         | 9,006          | 9,331  | 104                      | 2.084   | 2.207  |
| April           | 8,928         | 9,444          | 10,020 | 106                      | 2.304   | 2.390  |
| May             | 10,719        | 11,076         | 11,826 | 107                      | 2.676   | 2.712  |
| June            | 11,195        | 11,805         | 12,180 | 103                      | 2.886   | 2.985  |
| July            | 10,443        | 10,865         | 11,362 | 105                      | 2.604   | 2.657  |
| August          | 9,330         | 9,812          | 10,385 | 106                      | 2.525   | 2.598  |
| September       | 8,338         | 8,880          | 9,330  | 105                      | 2.145   | 2.241  |
| October         | 7,992         | 8,510          | 8,928  | 105                      | 1.989   | 2.077  |
| Jan.-Oct. Incl. | 89,891        | 95,151         | 99,818 | 104.9                    | 2.286   | 2.367  |
| November        | 7,303         | 7,845          | --     |                          | 1.876   | 1.977  |
| December        | 7,516         | 8,076          | --     |                          | 1.868   | 1.968  |
| Yearly Total    | 104,710       | 111,072        |        |                          | 2.216   | 2.301  |

Milk production per cow on November 1 averaged the highest for the date in 17 years of record largely because of the best late October pastures in a dozen years, and continued liberal grain feeding. In all regions except the South Central States production per cow was well above average and in the North Atlantic and East North Central States it was a record high for the date. In the East North Central States, which produce more than three-fifths of the milk used for making those vital food-for-freedom products -- cheese and evaporated milk -- production per cow exceeded the 1930-39 average for November 1 by 11 percent, and that of a year ago by 3 percent. In the West North Central States the November 1 production per cow reported this year was exceeded only by that a year ago, and in the Western group it was the third highest in 17 years.

For the country as a whole, milk production per cow in herds kept by crop correspondents averaged 12.84 pounds on November 1, compared with 12.74 pounds on that date last year and the 1930-39 average of 11.87 pounds November 1. The percentage of milk cows reported milked in the country as a whole continued downward seasonally at a level below that of the past 5 years, but in the North Central States the decline from October 1 to November 1 was less than usual.

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Dairy pastures in the Western two-thirds of the country were in unusually good condition on November 1, but along the Atlantic Seaboard, and in Kentucky and Tennessee and portions of adjoining States they ranged mostly from only fair to extremely poor. This sharp regional variation in condition was reflected in reports from dairy correspondents relative to the proportion of the feed of milk cows being obtained from pastures. In the North and South Atlantic States, the proportion obtained from pastures on November 1 this year was considerably below the 5-year average for the date. In the West North Central area, however, where abundant October rainfall encouraged the growth of new feed and the absence of severely cold weather permitted milk cows to make better than average use of fall pastures, dairy correspondents reported 69 percent of the feed of milk cows obtained from pastures compared with a 5-year average of 55 percent for the date.

Percentage of Feed of Milk Cows Obtained from Pasture

as Reported by Dairy Correspondents, November 1, 1935-39 Av., 1940-41

| Year        | North    | E. North | W. North | South    | South   | United  |         |
|-------------|----------|----------|----------|----------|---------|---------|---------|
|             | Atlantic | Central  | Central  | Atlantic | Central | Western | States  |
|             | Percent  | Percent  | Percent  | Percent  | Percent | Percent | Percent |
| 1935-39 Av. | 28.5     | 47.4     | 54.7     | 50.3     | 62.7    | 40.1    | 49.2    |
| 1940        | 23.9     | 51.0     | 63.5     | 45.1     | 61.8    | 48.6    | 52.0    |
| 1941        | 23.4     | 48.9     | 69.3     | 45.9     | 67.6    | 44.9    | 54.1    |

Improvement in pasture condition during October was noted especially in the Ohio Valley and Great Lakes region where dry weather had previously affected pastures. In New York, Ohio, Indiana, Illinois, Michigan and Kentucky, pasture condition on November 1 was 12 points or more higher than a month earlier. In the Great Plains States, fall-seeded grains were growing well for the most part, but in many places wet weather limited their use as pasture for livestock. In the Western group of States dairy pastures were excellent in early November.

The liberal feeding of milk cows that has been reported each month since early summer continued through October in all parts of the country. On November 1, the daily quantity of grain and concentrates fed per cow in herds kept by dairy correspondents averaged 4.95 pounds, about 8 percent more than on the same date in any of the past 10 years for which comparable records are available. In the northern and central Atlantic Coast areas where feed from pastures has been reduced by the advancing season or by drought conditions, the rate of grain feeding reported on November 1 was the heaviest of an 11-year record. In the East North Central region where pastures were fairly good, but where milk production was being pushed for use in cheese and in evaporated and dried milk products, the rate of feeding was likewise record high. West of the Mississippi, the rate of feeding averaged remarkably high for the season, considering the excellent pasturage available; but in some States it was below the peak feeding reported in years when fall pastures were poor; and in many of the Western Corn Belt and Great Plains States it was somewhat below the high figure reported during the early 1930's when grain was very cheap.

Grain and Concentrates fed per milk cow per day in herds kept by dairy correspondents, November 1, 1935-39 Av., 1940-41

| Year        | North    | E. North | W. North | South    | South   | United  |        |
|-------------|----------|----------|----------|----------|---------|---------|--------|
|             | Atlantic | Central  | Central  | Atlantic | Central | Western | States |
|             | Pounds   | Pounds   | Pounds   | Pounds   | Pounds  | Pounds  | Pounds |
| 1935-39 Av. | 4.96     | 4.06     | 3.44     | 5.06     | 3.94    | 3.00    | 3.97   |
| 1940        | 5.5      | 4.6      | 3.9      | 5.8      | 4.5     | 3.3     | 4.51   |
| 1941        | 6.1      | 5.2      | 4.3      | 5.8      | 5.1     | 3.4     | 4.95   |

## DAIRY PRODUCTION

Milk Produced per Milk Cow in  
Herds kept by Reporters 1/

Condition of Dairy Pastures 2/

|             | Nov. 1<br>: Av. 1930-39: | Nov. 1<br>1940 | Nov. 1<br>1941 | Nov. 1<br>Av. 1935-39 | Nov. 1<br>1940 | Nov. 1<br>1941 |
|-------------|--------------------------|----------------|----------------|-----------------------|----------------|----------------|
|             |                          | Pounds         |                |                       | Percent        |                |
| Me.         | 13.0                     | 12.8           | 13.5           | 75.0                  | 69             | 60             |
| N. H.       | 14.5                     | 13.6           | 14.5           | 74.4                  | 75             | 67             |
| Vt.         | 13.1                     | 12.9           | 13.7           | 78.4                  | 75             | 66             |
| Mass.       | 17.2                     | 17.3           | 17.3           | 77.4                  | 63             | 54             |
| R. I.       | 3/                       | 3/             | 3/             | 81.2                  | 71             | 54             |
| Conn.       | 16.9                     | 16.4           | 18.4           | 75.8                  | 63             | 58             |
| N. Y.       | 15.5                     | 15.8           | 17.0           | 73.8                  | 71             | 65             |
| N. J.       | 17.7                     | 18.9           | 18.4           | 70.0                  | 70             | 38             |
| Pa.         | 15.4                     | 15.7           | 16.0           | 70.6                  | 78             | 59             |
| N. Atl.     | 15.44                    | 15.84          | 16.53          | 72.7                  | 73.7           | 59.9           |
| Ohio        | 14.0                     | 14.5           | 15.0           | 69.6                  | 67             | 79             |
| Ind.        | 12.9                     | 13.3           | 14.1           | 68.2                  | 59             | 78             |
| Ill.        | 12.7                     | 14.4           | 14.6           | 67.6                  | 62             | 92             |
| Mich.       | 15.1                     | 17.2           | 16.7           | 69.8                  | 83             | 78             |
| Wis.        | 13.3                     | 14.4           | 15.2           | 71.8                  | 75             | 87             |
| E. N. Cent. | 13.55                    | 14.65          | 15.10          | 70.0                  | 70.9           | 83.9           |
| Minn.       | 11.9                     | 12.7           | 12.5           | 61.0                  | 66             | 81             |
| Iowa        | 12.2                     | 13.2           | 13.0           | 71.6                  | 80             | 92             |
| Mo.         | 9.1                      | 9.9            | 10.3           | 53.2                  | 60             | 86             |
| N. Dak.     | 9.2                      | 11.2           | 11.0           | 45.4                  | 72             | 85             |
| S. Dak.     | 9.4                      | 10.0           | 10.1           | 45.2                  | 55             | 76             |
| Nebr.       | 11.1                     | 11.5           | 12.5           | 49.8                  | 45             | 80             |
| Kans.       | 11.4                     | 12.6           | 11.8           | 47.4                  | 64             | 88             |
| W. N. Cent. | 10.82                    | 11.86          | 11.71          | 57.6                  | 65.4           | 84.7           |
| Del.        | 3/                       | 3/             | 3/             | 71.8                  | 73             | 39             |
| Md.         | 14.3                     | 15.2           | 14.9           | 73.0                  | 75             | 40             |
| Va.         | 10.7                     | 11.8           | 12.3           | 70.6                  | 79             | 38             |
| W. Va.      | 11.0                     | 11.2           | 11.7           | 69.6                  | 72             | 75             |
| N. C.       | 10.7                     | 11.4           | 11.7           | 70.8                  | 62             | 53             |
| S. C.       | 9.7                      | 10.3           | 10.2           | 59.0                  | 54             | 56             |
| Ga.         | 8.3                      | 8.8            | 8.8            | 62.6                  | 59             | 60             |
| Fla.        | 3/                       | 3/             | 3/             | 77.0                  | 62             | 80             |
| S. Atl.     | 10.51                    | 11.39          | 11.58          | 68.8                  | 67.7           | 53.0           |
| Ky.         | 10.5                     | 10.5           | 11.1           | 61.2                  | 48             | 68             |
| Tenn.       | 9.1                      | 9.7            | 9.7            | 56.2                  | 48             | 54             |
| Ala.        | 7.8                      | 8.0            | 8.7            | 61.2                  | 57             | 70             |
| Miss.       | 6.6                      | 5.8            | 6.5            | 61.4                  | 64             | 75             |
| Ark.        | 7.7                      | 8.1            | 7.8            | 60.2                  | 65             | 75             |
| La.         | 3/                       | 3/             | 3/             | 70.8                  | 67             | 85             |
| Okl.        | 8.9                      | 9.1            | 8.5            | 48.8                  | 63             | 88             |
| Tex.        | 8.4                      | 8.5            | 7.9            | 63.6                  | 63             | 93             |
| S. Cent.    | 8.45                     | 8.60           | 8.44           | 59.3                  | 58.7           | 77.8           |
| Mont.       | 11.9                     | 13.8           | 13.6           | 62.6                  | 86             | 90             |
| Idaho       | 16.1                     | 17.3           | 16.1           | 76.6                  | 96             | 90             |
| Wyo.        | 11.4                     | 13.6           | 13.0           | 72.0                  | 78             | 96             |
| Colo.       | 11.7                     | 13.6           | 14.0           | 64.2                  | 69             | 95             |
| N. Mex.     | 3/                       | 3/             | 3/             | 70.2                  | 65             | 96             |
| Ariz.       | 3/                       | 3/             | 3/             | 83.6                  | 79             | 87             |
| Utah        | 3/                       | 3/             | 3/             | 75.0                  | 75             | 92             |
| Nev.        | 3/                       | 3/             | 3/             | 85.2                  | 90             | 92             |
| Wash.       | 16.0                     | 16.8           | 17.0           | 71.8                  | 87             | 93             |
| Oreg.       | 14.3                     | 15.6           | 15.4           | 72.4                  | 90             | 95             |
| Calif.      | 17.1                     | 17.4           | 17.5           | 76.8                  | 81             | 83             |
| West        | 14.09                    | 15.78          | 15.50          | 73.0                  | 82.1           | 89.6           |
| U. S.       | 11.87                    | 12.74          | 12.84          | 65.7                  | 69.0           | 79.1           |

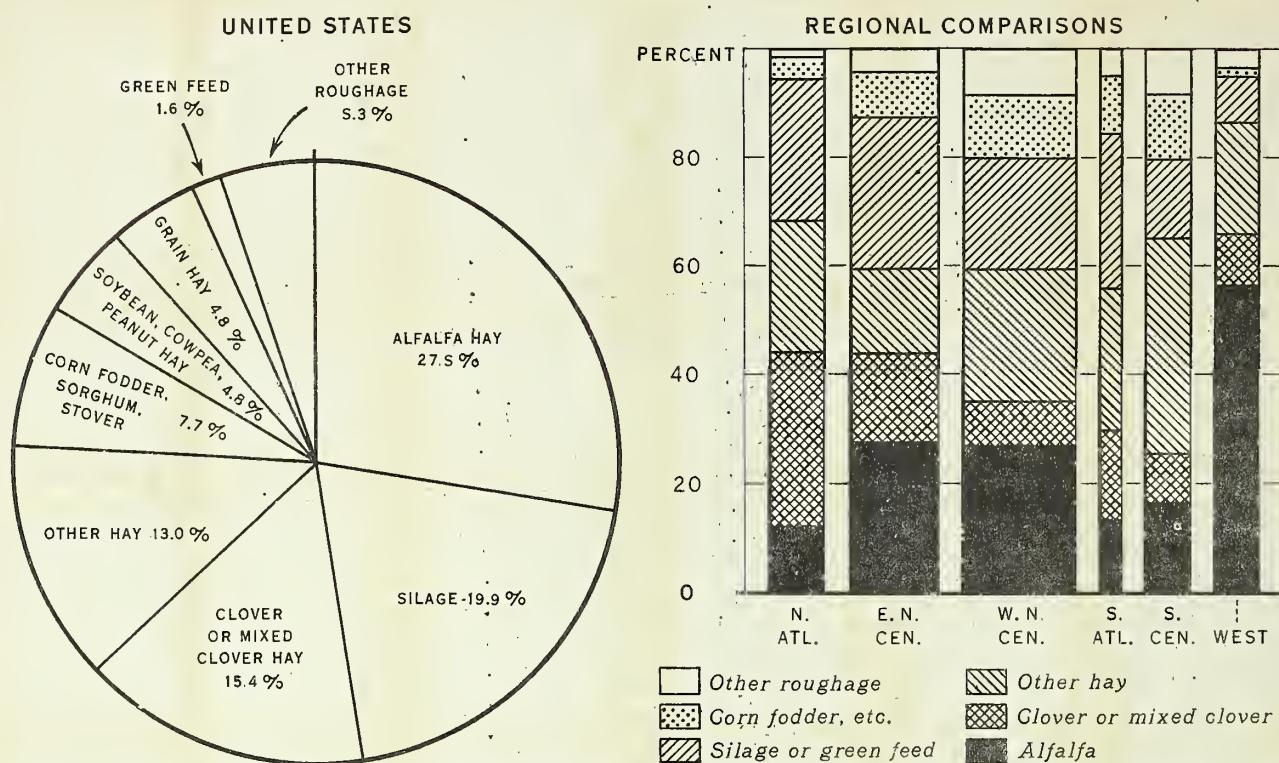
1/ Averages represent the reported daily milk production of herds kept by reporters divided by the total number of milk cows (in milk or dry) in these herds. Figures for New England States are based on combined returns from crop and special dairy reporters and are weighted by counties. Figures for other States, regions, and U. S. are based on returns from crop reporters only.

2/ State averages are based on reports by crop correspondents. For regional and U. S. averages the States are combined in proportion to the importance of pastures to dairy production on November 1.

3/ State averages omitted because of instability, but reports are included in arriving at regional averages.

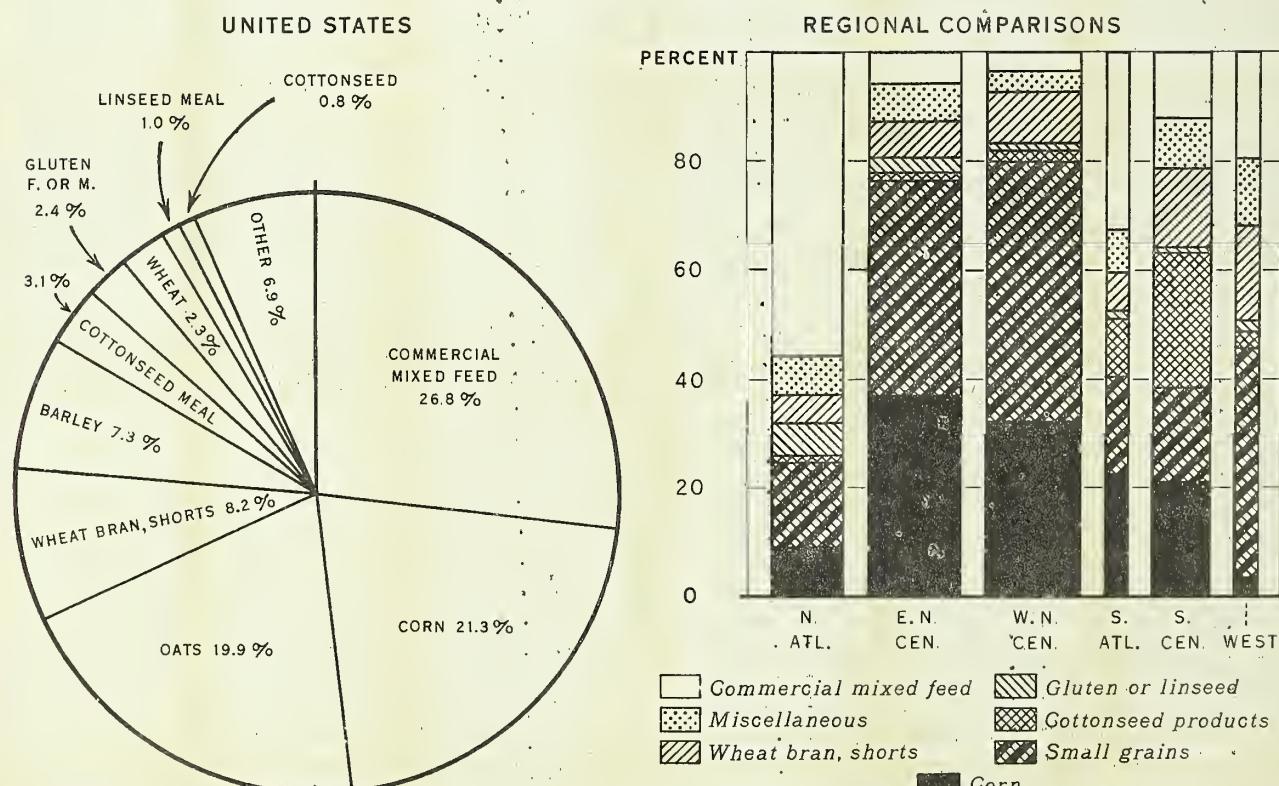
# VARIOUS FEEDS USED IN RATIONS FED TO MILK COWS AS REPORTED BY DAIRY CORRESPONDENTS

## ROUGHAGE OTHER THAN PASTURE EACH KIND AS PERCENTAGE OF TOTAL \*



\* 1933-37 AVERAGES BASED ON OCTOBER 1 REPORTS ON QUANTITIES FED OR TO BE FED DURING YEAR. EXPRESSED AS RELATIVE QUANTITIES OF HAY EQUIVALENT. 1 LB. HAY=3 LBS. SILAGE, OR GREEN FEED=2 LBS. OTHER ROUGHAGE.

## GRAIN AND CONCENTRATES EACH KIND AS PERCENTAGE OF TOTAL $\Delta$



$\Delta$  1931-40 AVERAGE OF FALL REPORTS ON QUANTITIES FED AT THAT TIME, AND CONSEQUENTLY NOT STRICTLY REPRESENTATIVE OF AVERAGE RATION FED DURING YEAR

# KINDS OF GRAIN AND CONCENTRATES FED TO MILK COWS

Important changes in the kind of grain and concentrates fed to milk cows were in evidence this fall as farmers stepped up the rate of grain feeding to more than 25 percent above the 1931-40 average. Compared with the composition of the dairy ration in the past decade and in most recent years, the changes this year reflect an abundance of feed grains, especially corn, a limited supply of by-product feeds in relation to the rapidly expanding consumption of feed by livestock, and a moderate shift toward the increased use of commercially mixed dairy feeds that usually accompanies rising feed prices.

On November 1 this year, corn, oats, and barley together made up 53.9 percent of grain ration fed by dairy correspondents, compared with 48.5 percent in the 1931-40 period. The above-average proportions of such farm-grown grains is not particularly surprising considering the abundant supplies this year in contrast to shortages in some of the drought years included in the 10-year average. Farmers, however, apparently found little incentive to feed high-priced wheat, which, though normally making up only a few percent of the ration, has this year been mentioned as a possible source of feed because of the domestic surplus. Wheat this fall made up only 1.3 percent of the total, as low as previously reported in the 11-year period.

The sharply increased prices of cottonseed and cottonseed meal, together with the smaller supplies, caused farmers to dole them out sparingly to milk cows. This fall these seeds made up only about two-thirds of the usual proportion of the ration. However, farmers included about twice the usual proportion of linseed meal which is relatively plentiful on domestic markets and, for the first time since records began, linseed meal was more popular than cottonseed meal. The soaring prices of bran, as shown in the graph on the front cover, go far toward explaining why dairymen have decreased the quantities of wheat by-product feeds in the rations fed their cows this fall. Bran and other wheat millfeeds made up less than half as much of the ration as in the 1931-40 period and the smallest proportion reported for any of the individual years. Commercially mixed dairy feeds, which usually make up slightly more than a fourth of all grain and concentrated feeds, were fed to a greater extent than usual this fall but were not relied upon so heavily as in October of the years 1934-37 when supplies of farm-grown feed grains were low on many farms because of the droughts.

Farmers fed more corn and relatively less barley and oats than on November 1 last year. However, the shift to corn restored these grains to about their usual relationship in the ration, which was upset a year ago by unusually low prices for oats and barley compared with that of corn. Soybeans and soybean meal were being used less extensively in dairy rations than in any of the past 3 years, reflecting both higher prices for the beans and delay in harvesting the crop this year because of extremely wet fall weather in the major producing areas.

As usual, the kind of grain fed to milk cows varied markedly by regions, with purchased mixed feed predominating in the Northeast, farm-grown grains in the central dairy manufacturing areas, and each part of the country depending chiefly on the kinds of feed most abundant locally. The average composition of both the roughage and concentrate rations are shown by regions in the graph on the opposite page. This is a reprint from a more detailed discussion of feed rations that was published in "Marketing Activities" for September 1941.

## RELATIVE QUANTITIES OF VARIOUS GRAINS AND CONCENTRATES FED TO MILK COWS IN HERDS KEPT BY DAIRY CORRESPONDENTS, BY MAJOR GROUPS OF STATES, 1931-40 AV. FALL MONTHS 1/ AND NOV. 1, 1941

| Kind of Grain :<br>or<br>Concentrate : | North      |         | East       |         | North                   |         | South                   |         | South                   |         | West                    |         | United<br>States        |         |       |
|--|------------|---------|------------|---------|-------------------------|---------|-------------------------|---------|-------------------------|---------|-------------------------|---------|-------------------------|---------|-------|
|  | Av. : 1941 | Percent | Av. : 1941 | Percent | Central :<br>Av. : 1941 | Percent |       |
| Corn                                   | 9.2        | 10.8    | 36.8       | 37.7    | 32.2                    | 40.1    | 22.5                    | 26.1    | 20.7                    | 31.3    | 3.6                     | 3.7     | 21.3                    | 24.8    |       |
| Oats                                   | 10.5       | 12.3    | 30.0       | 31.9    | 35.6                    | 37.9    | 6.7                     | 4.4     | 12.5                    | 13.5    | 13.3                    | 11.3    | 19.9                    | 21.0    |       |
| Barley                                 | 3.5        | 3.3     | 6.4        | 6.6     | 9.9                     | 11.6    | 7.5                     | 6.4     | 2.9                     | 5.1     | 25.3                    | 31.8    | 7.3                     | 8.1     |       |
| Wheat                                  | 1.5        | .9      | 3.1        | 1.5     | 2.2                     | .9      | 3.7                     | 1.5     | 2.0                     | 1.6     | 3.5                     | 3.5     | 2.3                     | 1.3     |       |
| Cottonseed meal,<br>or cake            | 1.3        | .3      | 1.2        | .4      | 1.8                     | .2      | 8.6                     | 5.4     | 17.4                    | 15.3    | 2.7                     | 2.1     | 3.1                     | 2.0     |       |
| Cottonseed                             | --         | --      | --         | --      | .1                      | .3      | 2.1                     | 1.4     | 7.4                     | 5.6     | .5                      | .3      | .8                      | .6      |       |
| Gluten feed, meal                      | 5.1        | 3.9     | 1.9        | 2.2     | .3                      | .1      | .8                      | .4      | .6                      | .8      | .2                      | .6      | 2.4                     | 2.0     |       |
| Linseed meal                           | 1.1        | 3.1     | .9         | 2.7     | .9                      | 1.2     | .5                      | 1.4     | .2                      | --      | 1.5                     | 2.3     | 1.0                     | 2.2     |       |
| Soybeans, or meal                      | 2/         | 1.2     | 2/         | 3.1     | 2/                      | 1.2     | 2/                      | 2.4     | 2/                      | 1.2     | 2/                      | .6      | 2/                      | 1.6     |       |
| Wheat bran, shorts                     | 5.2        | 2.5     | 6.5        | 3.8     | 9.4                     | 2.7     | 7.1                     | 4.3     | 14.7                    | 5.0     | 17.3                    | 10.0    | 8.2                     | 3.7     |       |
| Commercial<br>mixed                    |            | 55.6    | 55.5       | 6.4     | 7.8                     | 3.8     | 2.6                     | 32.8    | 41.2                    | 12.4    | 14.6                    | 19.7    | 24.2                    | 26.8    | 28.2  |
| Other grains &<br>conc.                |            | 7.0     | 6.2        | 6.8     | 2.3                     | 3.8     | 1.2                     | 7.7     | 5.1                     | 9.2     | 6.0                     | 12.4    | 9.6                     | 6.9     | 4.5   |
| Total                                  |            | 100.0   | 100.0      | 100.0   | 100.0                   | 100.0   | 100.0                   | 100.0   | 100.0                   | 100.0   | 100.0                   | 100.0   | 100.0                   | 100.0   | 100.0 |

1/ Oct. 1, 1931-37 and Nov. 1, 1938-40

2/ Included in "other" in average

VALUE PER 100 POUNDS OF THE GRAIN AND CONCENTRATES FED TO MILK COWS

Milk production per cow depends directly on the quantity and kind of all feed that the cows consume. Most cows secure about as much hay or roughage as they need but the quantities and kinds of grain and concentrates included in the ration vary from month to month, depending to a considerable extent on the prices of the various grains and feedstuffs, and on the relation of these prices to the returns obtained from the dairy products sold. Of course, during the pasture season feeding depends on the growth of pasture and in some areas the rate of feeding is rather closely adjusted to the supply of home-raised grain available on each farm or to other local conditions, but the value of the feed is important in all areas. In order to measure regional differences in condition and to forecast future adjustments in feeding there long has been a need for statistics that show, month by month, the value per unit of the rations being fed in various parts of the country.

But, as shown on pages 8 and 9, markedly different rations are fed in various parts of the country and these rations change from month to month. Furthermore, the rations differ so much from farm to farm that it is difficult to compute their average value per unit. Because of these difficulties, dairy correspondents have been asked at intervals to report the "value per 100 lbs. of the grain (including millfeeds and concentrates) fed to milk cows" on their farms. By simply averaging these reports by States and combining the State averages in proportion to the quantities of grain and concentrates usually fed to milk cows it has been possible to secure averages that serve to show both the changes and the regional differences. An analysis of the reports from farmers keeping different numbers of milk cows shows that for the year studied these averages are almost identical with what appeared to be the true value of the feed at the point where it was being fed. Some of these valuations are shown in the table below.

VALUE PER 100 POUNDS OF GRAIN AND CONCENTRATE RATION  
FED TO MILK COWS, AS REPORTED BY DAIRY CORRESPONDENTS

|                                 | 1938    | 1939    | 1940    | 1941    |           |
|---------------------------------|---------|---------|---------|---------|-----------|
|                                 | Dollars | Dollars | Dollars | Dollars | % of 1940 |
| <u>Regional Averages Nov. 1</u> |         |         |         |         |           |
| North Atlantic                  | 1.52    | 1.69    | 1.66    | 2.02    | 121.7     |
| East North Central              | 1.00    | 1.11    | 1.19    | 1.50    | 126.1     |
| West North Central              | .78     | .97     | 1.00    | 1.21    | 121.0     |
| South Atlantic                  | 1.40    | 1.52    | 1.60    | 2.00    | 125.0     |
| South Central                   | 1.16    | 1.36    | 1.33    | 1.64    | 123.5     |
| Western                         | 1.22    | 1.40    | 1.31    | 1.71    | 130.5     |
| <u>UNITED STATES AVERAGES</u>   |         |         |         |         |           |
| February 1                      | 1.37    | 1.19    | 1.39    | 1.38    | 99.3      |
| May 1                           | --      | --      | --      | 1.41    | --        |
| August 1                        | --      | --      | --      | 1.51    | --        |
| November 1                      | 1.10    | 1.26    | 1.28    | 1.58    | 123.4     |

Recently a comparison of these values with the monthly prices of grains as sold by farmers and the prices of straight and mixed feeds as bought by farmers in each region has made it possible to calculate what appear to be nearly comparable values for intervening months. Tentative estimates for the last few years are shown in the graph on the front cover and more complete details and comparisons by regions will be shown in future issues.

These estimates of average value differ in preparation and use from most indices of feed prices or costs. They represent the average value per unit of whatever grains and concentrates the farmers were feeding at the time. They include the value of grain at the farms where it is fed and this may be either above or below local market price of the same grain where being sold in the same States, depending on whether there is a surplus or deficit of grain in the dairy areas, on grinding costs, on quality differences, and on other factors. If the feed is purchased, the values reported tend to follow local retail prices but sometimes differ quite markedly from the rapidly changing wholesale prices. Unlike some averages of wholesale prices they are not affected by nominal market quotations on feeds that are not moving in quantity. While believed to be close to actual values, the averages purposely do not reflect the minor fluctuations that would appear if the values were adjusted for the month-to-month changes in the percentage of the feed being fed in each State.

When the composition of the rations changes materially, calculations based on the cost of a fixed ration may not show the actual change in costs. On the other hand, these new valuations do reflect changes in average value that result from changes in the ration but do not show what would have been the value of a ration of uniform feeding quality. Thus, on November 1, 1941, dairy correspondents in South Dakota were feeding a ration that was 97 percent corn, oats, and barley, and these grains, if valued at prices local farmers were receiving on October 15, were worth 95 cents per 100 lbs. At prices prevailing in New York, a similar combination of grains was worth \$1.46 a difference of 51 cents. But New York farmers were actually feeding a much better ration, and reports on the value of the rations being fed to milk cows on November 1 averaged \$1.00 per 100 lbs. in South Dakota and \$1.97 in New York a difference of 97 cents. Changes in the composition of the rations also affect some comparisons between years, for, in general, the higher the price of feed in relation to other prices, the more carefully the rations are balanced.